

RUPPIA CIRRHOSA (RUPPIACEAE)
IN NORTH CENTRAL TEXAS

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Ruppia cirrhosa (Pentagna) Grande has been recently collected from Lake Granbury in Hood County and Possum Kingdom Lake in Palo Pinto County, both in North Central Texas. The species was found at multiple locations in Lake Granbury in association with *Stuckenia pectinata* (L.) Boerner. In Possum Kingdom Lake the plant was collected in only one location, a shallow area called the Peanut Patch. In both reservoirs, the species was submersed, had long stems rooted in the sediment in water less than two meters deep, and was abundant in the locations where it was found.

Voucher specimens: TEXAS **Hood Co.:** Lake Granbury, approximately 0.3 mi ENE of Mallard Pointe, 6 Aug 2003, *Morgan 599* (BAYLU); Lake Granbury, approximately 0.05 mi SW of intersection of Port Ridglea Drive and East Port Ridglea Court, 6 Aug 2003, *Morgan 562* (BAYLU); Lake Granbury, approximately 0.09 mi SW of terminus of East Port Ridglea Court, *Morgan 564* (BAYLU); **Palo Pinto Co.:** Possum Kingdom Lake at the Peanut Patch S of Caudill Mountain, N 32.89253, W 98 50671, 27 Aug 2003, *Morgan 601* (BAYLU).

Lake Granbury has a normal water surface elevation of 693 feet above mean sea level. At normal water surface elevation, Possum Kingdom Lake is 1,000 feet above mean sea level. Lake Granbury lies on the dividing line of the Blackland Prairie Ecoregion and the Oak Woods and Prairie Ecoregion, while Possum Kingdom Lake lies in the Rolling Plains Ecoregion. The terrain around both reservoirs is varied, with rolling topography near the headwaters, and becomes increasingly rugged towards the dam. Lake Granbury is slightly saline with an annual average chloride concentration of 642 mg/L, an annual average sulfate concentration of 228 mg/L, and an annual average total dissolved solids concentration of 1269 mg/L. Possum Kingdom Lake is also saline with an annual average chloride concentration of 995 mg/L, an annual average sulfate concentration of 364 mg/L, and an annual average total dissolved solids concentration of 1,801 mg/L. *Ruppia* is known to frequent water with high calcium and sulfur concentrations (Haynes 2000).

In North America, *Ruppia* has been treated as part of the Najadaceae (Steyermark 1963), the Potamogetonaceae (Thorne 1992), the Ruppiaceae (Correll and Johnston 1970, Haynes 2000), the Zannichelliaceae (Small 1933), and the Zosteraceae (Fernald 1950). We are following Haynes (2000), the most recent account of the North American species available.

The genus consists of about ten species of nearly worldwide distribution, with two species, *Ruppia cirrhosa* and *R. maritima* L., recognized in North America (Haynes 2000). Both are known to occur in Texas (Turner et al. 2003). *Ruppia maritima* is limited to the Gulf Coast region of the state with almost all records being from coastal counties, while *R. cirrhosa* is known from nine counties that are widely scattered in the Panhandle, South Texas Plains, along the Pecos River, and the northeast (Van Zandt Co.). The two species may be distinguished by peduncle characteristics (Haynes 2000). The peduncle length in *R. cirrhosa* is greater than 30 mm and the peduncle has five or more coils, while in *R. maritima* the peduncle is 2–25 mm long and has less than five coils. Haynes (2000) also mentions that *R. maritima* is primarily of coastal occurrence and *R. cirrhosa* is mostly of inland occurrence. This is the first report of the genus and species for the area treated in Diggs et al. (1999).

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